

## Koch, Kristine

---

**From:** Jennifer Woronets <jworonets@anchorqea.com>  
**Sent:** Thursday, June 26, 2014 3:33 PM  
**To:** Sheldrake, Sean  
**Cc:** Jennifer Woronets; Carl Stivers; Amanda Shellenberger; Bob Wyatt; Patty Dost; Jim McKenna (jim.mckenna@verdantllc.com); Koch, Kristine; Muza, Richard  
**Subject:** FW: CDF Analysis of Action Items from June 16, 2014 EPA/LWG Call  
**Attachments:** June 16 2014 CDF Follow Up\_2014-06-26.docx

Sean,

Please see below and attached from Carl.

Let us know if you have any questions.

Thank you,  
Jen Woronets ☺  
Anchor QEA, LLC  
[jworonets@anchorqea.com](mailto:jworonets@anchorqea.com)  
421 SW Sixth Avenue, Suite 750  
Portland, OR 97204  
503-972-5014

Please consider the environment before printing this email.

The information is intended to be for the use of the individual or entity named above. If you are not the intended recipient, please be aware that any disclosure, copying, distribution or use of the contents of this information is prohibited. If you have received this electronic transmission in error, please notify us by electronic mail at [jworonets@anchorqea.com](mailto:jworonets@anchorqea.com)

---

**From:** Carl Stivers  
**Sent:** Thursday, June 26, 2014 3:30 PM  
**To:** Jennifer Woronets  
**Subject:** FW: CDF Analysis of Actoin Items from June 16, 2014 EPA/LWG Call

Sean – Please find attached a memo addressing the action items on CDF analysis that were discussed at our June 16 conference call. The LWG is providing this information as part of the non-binding informal information exchange process for the revised FS technical discussions. The majority of the information was obtained from the Port as part of their 60% design work, and as summarized in the 2012 Draft FS. This memo fulfills EPA’s requests from the most current revised FS “Action Items List” (June 20, 2013) noted there as follows:

1. EPA provided a more detailed list of CDF disposal information requests to LWG on 15-May-14 [A conference call was held on 16-Jun-14 to clarify EPA’s requests.]:
  - a. Need more detail on GAC cost of \$16m (i.e. basis of choice of 0.1% when mixing directly with sediment vs. the range used for PRB of 0.1 to 1%, e.g. why not a range of application % for direct treatment?, likely unit cost based on x, etc.)
  - b. Water treatment of overflow weir costs are needed (as needed, primarily for solids provided GAC direct sediment treatment is used) cost needed.
  - c. Defining which alternatives the CDF would be attached to (deferred until optimized alternative development) based on likely fill volumes/acceptance, assumed % necessary to initiate construction (e.g. 150% of CDF capacity/acceptable wastes to be dredged is the target to attach the CDF to an optimized alternative)—open item.

- d. Has air monitoring been included (reference)? If not, need to add to construction monitoring cost line item.
- e. Need placeholder costs for interim closure thin layer sand caps (specific reference).
- f. It would be helpful to know the circumstances of the CDF failure referenced in this week's KOIN6 article: <http://koin.com/2014/05/13/fears-willamette-waste-response-coming-boil/> relative to whether the CDF concept in current consideration for the FS with its associated performance standards has addressed these issues to some degree in the 60% design. To my knowledge, this story wasn't fully appreciated during our T4 design process.

The memo completes these action items in a manner that is consistent with the clarifications and paths forward discussed in the June 16 meeting, which varies in some cases from the exact wording of the original request as captured in the above action items list.

This memo does not address the other two transport related questions from the action items list:

- g. Related comparative items:
  - i. Cost of onsite vs offsite transload facilities needed and assumed production rates (the same or different from T4 transload rate)—please provide reference in the FS.
  - ii. Need to include costs of barging vs rail—please provide reference in the FS.

Information on these last two action items is under preparation and will be provided to EPA soon.

Thanks.

Carl

**Carl Stivers**

**ANCHOR QEA, LLC**  
[cstivers@anchorgea.com](mailto:cstivers@anchorgea.com)  
23 S. Wenatchee Ave, Suite 120  
Wenatchee, WA 98801  
Phone: 509.888.2070

**ANCHOR QEA, LLC**  
[www.anchorgea.com](http://www.anchorgea.com)  
**Please consider the environment before printing this email.**

This electronic message transmission contains information that may be confidential and/or privileged work product prepared in anticipation of litigation. The information is intended for the use of the individual or entity named above. If you are not the intended recipient, please be aware that any disclosure, copying distribution or use of the contents of this information is prohibited. If you have received this electronic transmission in error, please notify us by telephone at (206) 287-9130.